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CWS XP Workstation Image Installation & Recovery Guide

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Release History

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1.1	03/18/08	CWS XP Workstation Image Installation & Recovery Guide / Amendment 24 Ref WS Recovery/ Workstation Image Installation & Recovery, v4.01.doc	Updated screenshots Revised Appendix A Added OWA instructions in Section 4.4	No
1.2	07/11/08	CWS XP Workstation Image Installation/Recovery Guide (v5.00 Image) / Amendment 24 Ref WS Recovery / CWS XP Workstation Image Installation & Recovery v1.2.doc	Removed Training Domain info Updated Appendix A Removed references to county and 2000 domains.	No
1.3	07/16/08	CWS XP Workstation Image Installation/Recovery Guide (v5.00 Image) / Amendment 24 Ref WS Recovery / CWS XP Workstation Image Installation & Recovery v1.3.doc	Corrected path statement on page 19	No
1.4	10/16/08	CWS XP Workstation Image Installation/Recovery Guide / Amend24 Ref XP Recovery / CWS XP Workstation Image Installation & Recovery v1.4.doc	Updated Reference Specification in Table 1-3 Replaced DOS screenshots in Section 3.3 Updated Appendix A Fixed minor grammatical errors	No

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1.5	1/21/09	CWS XP Workstation Image Installation/Recovery Guide / Amend24 Ref XP Recovery / CWS XP Workstation Image Installation & Recovery v1.5.doc	Updated Appendix A	No
1.6	3/10/09	CWS XP Workstation Image Installation/Recovery Guide / Amend24 Ref XP Recovery / CWS XP Workstation Image Installation & Recovery v1.6.doc	Updated Appendix A	No

Note: The hardcopy version of this document is for reference only.

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1.0 Introduction

1.1. Identification

This document is provided per the terms of the CWS/CMS Contract between the State of California and IBM, Contract Number 31091. The title of this document is *CWS XP Workstation Image Installation & Recovery Guide*.

1.1.1. Release

This document is provided as support documentation for the Dedicated County Workstation Image Recovery disks. This is not associated with any release.

1.1.2. Conventions

For the remainder of this document:

1. The terms installation and recovery are used interchangeably.

2. The terms workstation and machine are used interchangeably.

1.2. Document Overview

1.2.1. Description /Purpose

This document, *CWS XP Workstation Image Installation & Recovery Guide*, provides the installation instructions required to install the dedicated county CWS workstation image for the various supported workstation hardware configurations.

1.2.2. Scope

The *CWS XP Workstation Image Installation & Recovery Guide* documents the installation procedures required to install and configure a CWS workstation image onto the supported CWS workstation (desktop and laptop) models. These procedures include the steps required to recover workstation configuration and user data in the event the image is being re-installed (recovered) on a workstation.

This document assumes the use of the dedicated county image and dedicated county installation/recovery process. Co-existent counties have a wide range of images and recovery processes that may vary significantly from this document.

1.2.3. Document Organization

The *CWS XP Workstation Image Installation & Recovery Guide* is structured into the following sections. The summary for each section includes a brief description of the key components of the section:

1. **Introduction** – This section provides a document overview, naming conventions, scope, target audience, and list of reference material.

2. **Image Installation/Recovery Process Overview** – This section provides a brief overview of the Image Installation and Recovery Process.

3. **Image Installation/Recovery Process** - This section contains the procedures used to install/recover the CWS workstation image on a supported CWS workstation.

4. **Workstation Customization after Image Installation** – This section identifies the procedures used to customize the workstation to complete the installation/recovery process.

Appendix A. – Supported Hardware Configurations – This appendix lists the supported workstation (desktop and laptop) models.

1.3. Intended Use and Audience for this Document

This document is intended for the CWS/CMS Help Desk or other technical staff that will be assisting the actual end user in the process of performing a Workstation Recovery. It is not intended for the end user.

It is assumed the reader of this document has a basic technical understanding of all the hardware supported by the CWS/CMS project, a basic understanding of Windows, and the ability to support customers over the phone. Detailed instructions on performing basic tasks will not be provided by this document as it is assumed that these are tasks the audience already understands.

1.4. Definitions

1.4.1. Glossary of Terms and Acronyms

Terms and acronyms used in this document are in accordance with *CWS/CMS Project Glossary of Terms and Acronyms* unless otherwise noted. For any project-wide terms, acronyms, or definitions, please refer to the *CWS/CMS Project Glossary of Terms and Acronyms*.

Table 1-1: List of Acronyms provides the definition of acronyms used in this document whose meaning must be derived in context or that may be specific to the CWS/CMS project effort.

Table 1-1: List of Acronyms

Acronym	Description
LCD	Liquid Crystal Display
UNC	Universal Naming Convention

1.5. References

1.5.1. Referenced Deliverables

Information from the documents listed in *Table 1-2: Referenced Deliverables* is referenced in this document. These references have been formally delivered to the State as deliverables, work products, reference material, etc.

Table 1-2: Referenced Deliverables

#	Document Title	Document ID	Reference Specification
1	Windows 2000 Laptop Users Guide	Amend 21 Ref LT UG	Windows 2000 Laptop Users Guide v3.2.doc, version 3.2, dated May 18, 2006

1.5.2. Other References

Information from the documents listed in *Table 1-3: Other References* is referenced in this document. These references are provided in support of this document.

Table 1-3: Other References

#	Document Title	Document ID	Reference Specification
1	CWS/CMS Glossary of Terms and Acronyms	Amend 24 Ref Glossary	0145 Contract 31091, Amendment 24 - CWSCMS Glossary of Terms and Acronyms, v3.0 (attachment).pdf, version 3.0, dated July, 2, 2008 \\CWSFS1\Common\CWS Project References\0145 Contract 31091, Amendment 24 - CWSCMS Glossary of Terms and Acronyms, v3.0 (attachment).pdf

2.0 Image Installation/Recovery Process Overview

The Image Installation/Recovery Process is used to place a CWS workstation image on supported CWS workstation (desktops and laptops) hardware. In the event of an image recovery, the Image Installation/Recovery Process should be used only when the Boulder Help Desk has agreed this is the most effective and efficient solution to a user's problem.

The user must know which workstation they want to do the recovery on, and they will have to be sure they have the appropriate DVD(s) for that machine type. Each recovery DVD will be labeled according to the machine type it supports. At this time, the only supported recovery method is via Bootable DVD.[1]

2.1. Image Installation/Recovery Process Brief

In brief, the Image Installation/Recovery Process will go through the following steps (some of which may not be visible to the user):

1. The Image Installation/Recovery Process detects an existing CWS/CMS Windows 2000 or XP image[2].

2. The user is prompted to confirm they want to continue, as well as being reminded that they should perform any data backup prior to this process.

3. The user is asked again to confirm the replacement of their image.

4. The Image Installation/Recovery Process replaces the Windows 2000 or XP image partition with a current CWS/CMS Windows XP workstation image. This part of the process takes approximately 30 minutes.

5. The user is instructed to remove the Image DVD and reboot the workstation. The next part of the process is a Windows XP mini-setup, which does not require any user interaction. This part of the process takes approximately five minutes.

6. After the mini-setup is complete and the workstation has rebooted, an Automated Workstation Configuration Process begins. This process takes approximately ten minutes and requires some user interaction. Once the automated process is complete, the user is notified and the workstation reboots.

7. The user logs on using their User ID/password, and any updates are pulled down from the network. Some additional manual configurations may also need to be performed.

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[1] Each DVD will also have a "Diskette" directory on it that can be used to create a boot-disk for the machine type. We have included this as a courtesy for users that have the required DVD in their system, but the workstation will not support booting from a DVD. It is not expected that this process will be used; it is provided as a contingency plan.

[2] The process determines an existing Windows 2000 or XP CWS/CMS image by looking for the hidden file *cws-wks.flg* on the data drive, which is C: from a DOS boot. It is possible that it could be an existing CWS/CMS Windows 2000 or XP workstation on which the file has been deleted, in which case the process will proceed as if it is a new hard drive or unrecognized image.

2.2. Supported Hardware and Network Adapters

This process only supports the default hardware configured with the workstations listed in *Appendix A. – Supported Hardware Configurations*. Any customizations to the hardware outside the bounds of *Appendix A. – Supported Hardware Configurations* are not supported for this process. For example, if the network card is exchanged with another brand, the image installation and recovery process may not work. Likewise, there could be problems if the hard drive is replaced with a non-standard drive. Other changes could also cause problems that would not be supported, although there may be ways the county can get around the problems.

3.0 Image Installation/Recovery Process

This section contains the procedures used to install/recover the CWS workstation image on a supported CWS workstation.

3.1. Required Information Prior to Starting Image Installation/Recovery

When workstation image installation/recovery is required, record the information identified in *Table 3-1: Image Installation/Recovery Support Information*. This information will be used to complete the recovery of the new Windows XP image.

Table 3-1: Image Installation/Recovery Support Information

Information Type	Description
Computer Machine Type (M/T)	The user must know the machine type to determine the proper image DVD to use in the recovery process. Each image is machine-specific.

3.2. Additional Information Required for Workstation Recovery

Installing the workstation image will overwrite all existing information on the workstation. When possible, collecting configuration information or user data for restoration after the image installation process minimizes the impact to the user.

3.2.1. Printer Port Names

When possible, obtain the printer port names from the workstation prior to the image installation procedure. The following steps will are used to record the printer port names:

1. Click **Start** | **Settings** | **Printers**

2. Single-click on each **Printer** icon in the window

3. Note the text (queue name and server name) under each icon

3.2.2. Backup of the User's Data

The users are responsible for backing up their data. However, the project has provided a basic "backup" process that will capture some, if not all, of the basic user files. The user can choose to use this method, but the project will not be responsible for any loss of data resulting from the use of this process.

To use this process, do the following:

1. Insert the recovery DVD into the workstation while Windows 2000 or XP is running AND the user is logged onto the workstation. The data migration program will run automatically[3].

2. An introduction to the "Best Effort" data migration and a disclaimer stating the user is ultimately responsible for their data backup is shown. Click **Continue**.
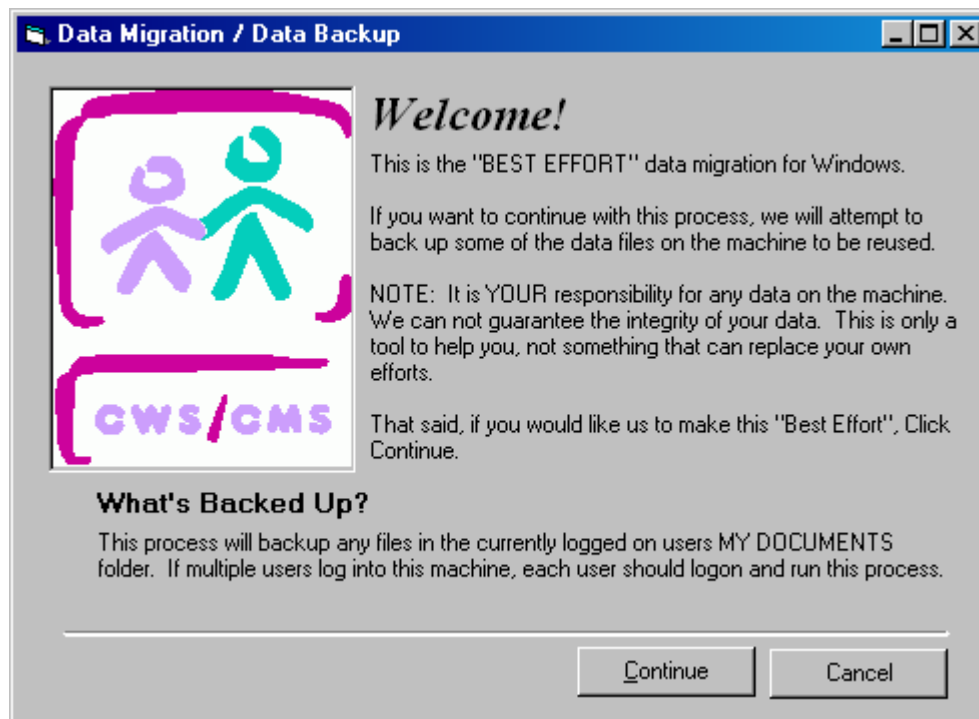
3. The user will then be notified when the process is complete.
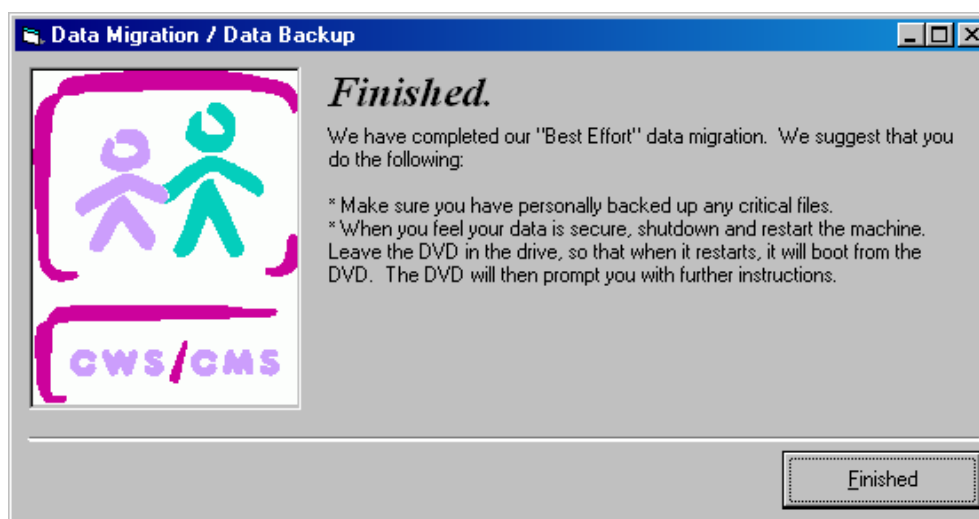
4. Press **Finished** when it is completed.

---

[3] If the "Best Effort" data migration does not kick off automatically, run the DATAMIG.EXE file in the *scripts* folder on the recovery disk.

It is still recommended that users perform their own backups. The process included on the DVD may not capture all the user's documents. This is what it captures:

♦ All files in the currently logged on user's **My Documents** folder

Any data needed beyond the list above will not be captured. Any additional users that share the workstation[4] will not have their private and secured data backed up.

This basic backup may not be sufficient under all circumstances. Users need to remember that a complete backup is their responsibility[5].

If the second partition, which is required for the "Best Effort" data migration does not exist, the user will receive the error message below. Instructions in the dialog box should be followed to avoid data loss.
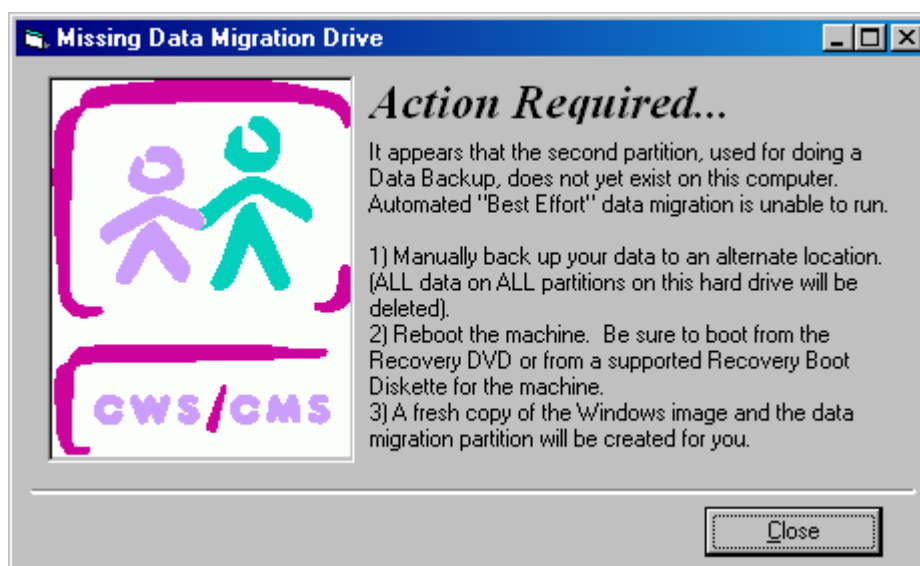
3.3. Image Installation Process for all Desktops and Laptops

1. Boot with the appropriate DVD for the machine type.

2. Verify that the workstation is connected to the network.

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[4] Because of the system security, as well as the strong possibility of document confusion or even duplication, more than one user's data will not be automatically backed up from the system. If the workstation is shared by multiple users, it is recommended the user ask the help desk for any additional assistance needed beyond the basic backup.

[5] If the user has a new hard drive or unrecognized image, the recovery process will still work. However, the user will be prompted only once if they want to continue, and the "best effort" data migration will not be available.

3. If the workstation does not already contain a CWS/CMS dedicated image, the user will receive the following screen. They should press **Y** to continue. Any data on the workstation will be deleted.
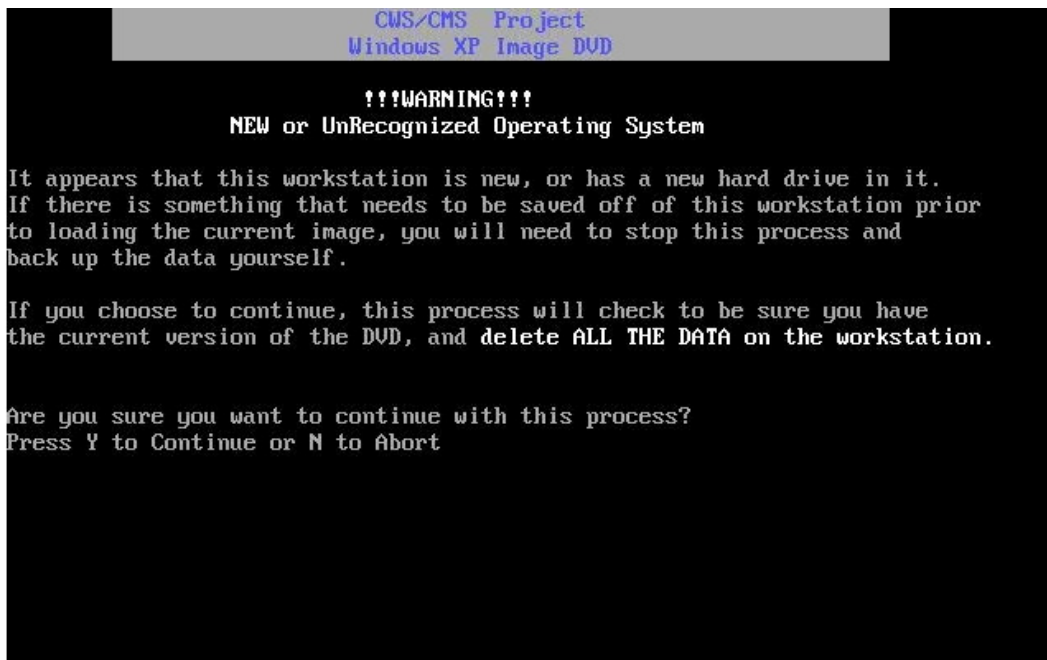
4. If the workstation contains an existing CWS/CMS dedicated image, the user is asked if they are sure they want to perform this function. On the same screen, they are told that a data migration should have been performed previously, and given instructions on how to do so if they have not. Assuming they have performed the migration, or are not going to perform it, they press **Y** to continue.
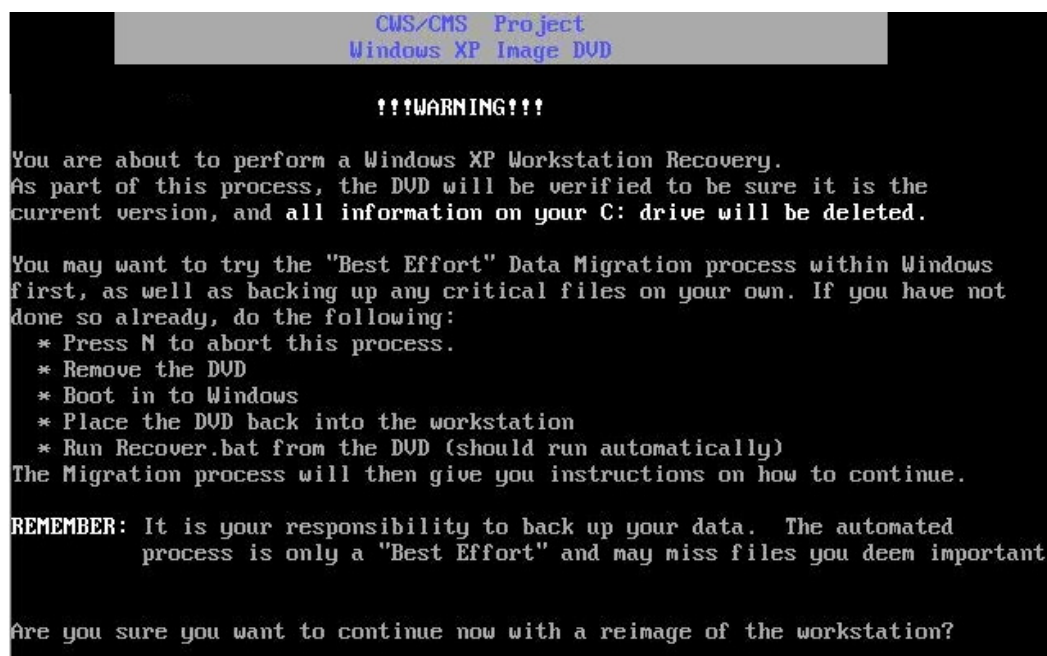
5. If the workstation contains an existing CWS/CMS dedicated image, the user is prompted again to continue the process. The user presses **Y** to continue the process.
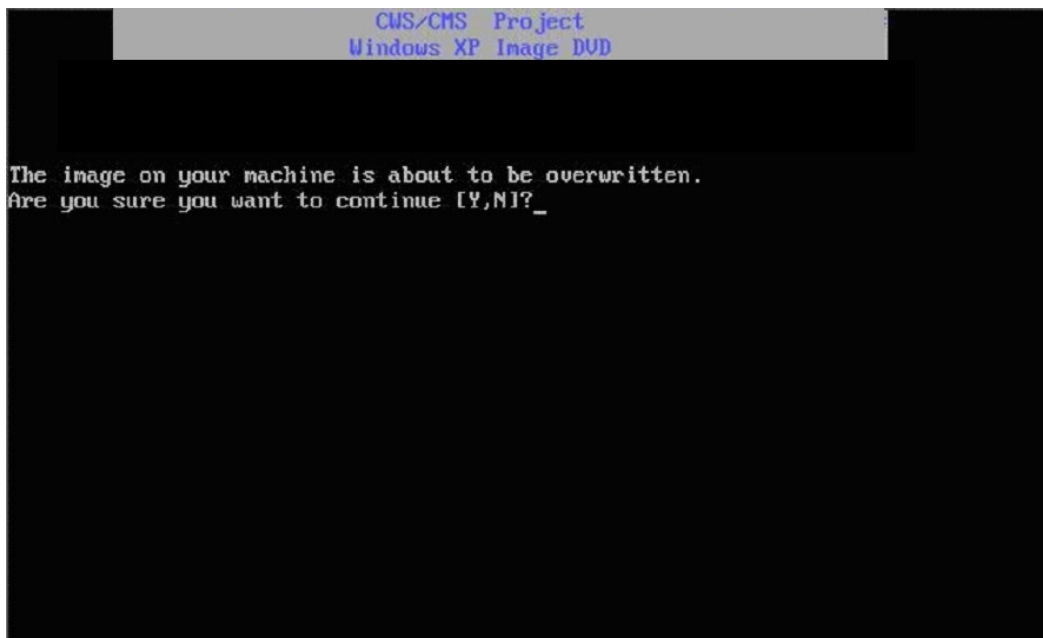
The image load process copies the dedicated image onto the workstation.

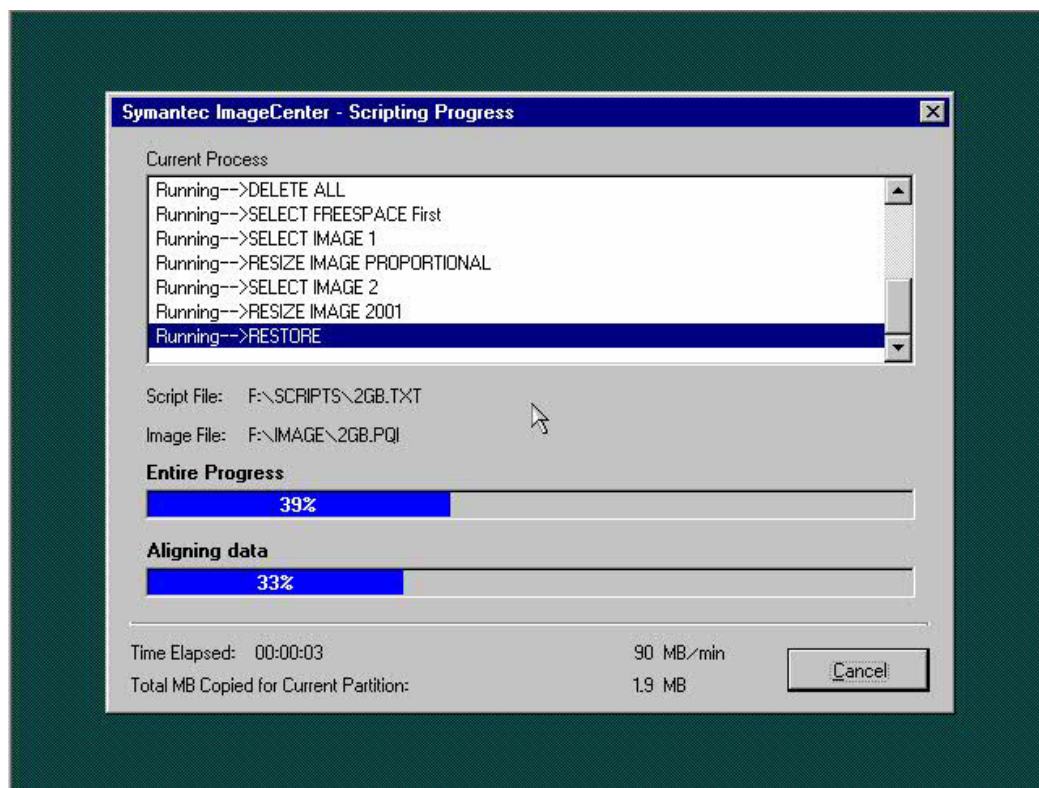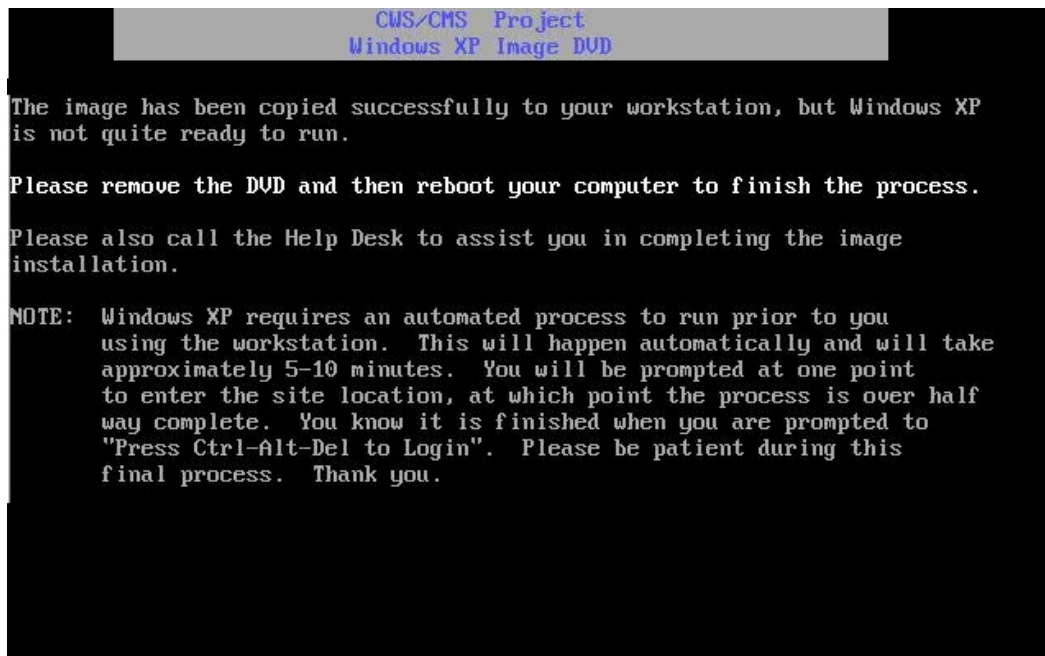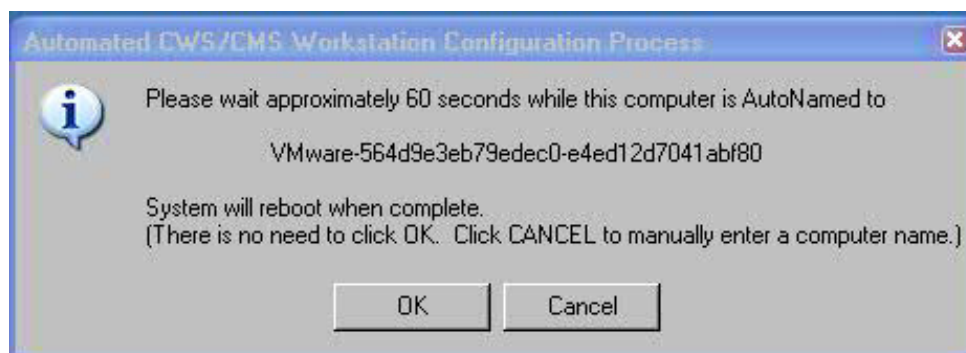6. When finished, the user is prompted to remove the DVD (and/or any diskette in the system) and reboot the workstation. The user removes all media, presses **CTRL+ALT+DEL** to reboot, and continues the process.


```
                    CWS/CMS   Project
                 Windows XP  Image DVD

The image has been copied successfully to your workstation, but Windows XP
is not quite ready to run.

Please remove the DVD and then reboot your computer to finish the process.

Please also call the Help Desk to assist you in completing the image
installation.

NOTE:  Windows XP requires an automated process to run prior to you
       using the workstation.  This will happen automatically and will take
       approximately 5-10 minutes.  You will be prompted at one point
       to enter the site location, at which point the process is over half
       way complete.  You know it is finished when you are prompted to
       "Press Ctrl-Alt-Del to Login".  Please be patient during this
       final process.  Thank you.
```

7. The computer then starts a "mini setup" of Windows XP to configure Windows XP for this specific workstation. At the end of this process, the workstation reboots automatically.

8. Next, the Automated Workstation Configuration Process, as identified in steps 9 through 14 begins. This process configures supported workstations with the necessary parameters allowing the workstation to join the Windows domain.

9. During the first boot of the Automated Workstation Configuration Process, the computer name will be changed from the default in the image to the serial number of the workstation. This process should run without user interaction[6]. Once the rename is complete, the workstation will reboot.


```
Automated CWS/CMS Workstation Configuration Process          [x]

   (i)   Please wait approximately 60 seconds while this computer is AutoNamed to

               VMware-564d9e3eb79edec0-e4ed12d7041abf80

         System will reboot when complete.
         (There is no need to click OK.  Click CANCEL to manually enter a computer name.)

                    [   OK   ]    [  Cancel  ]
```
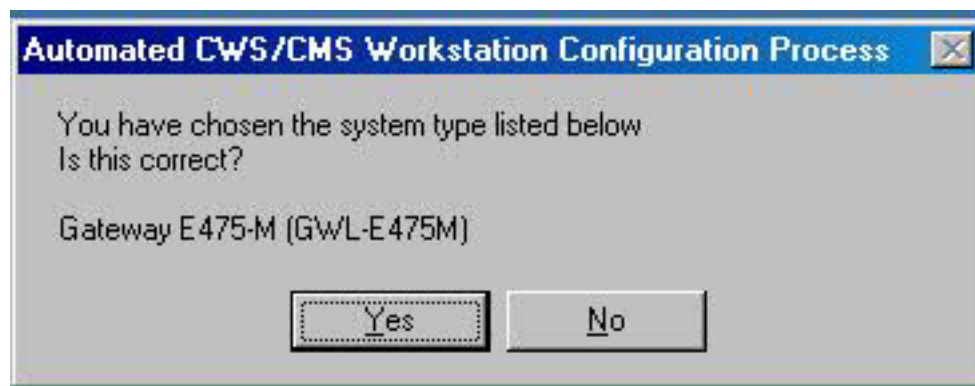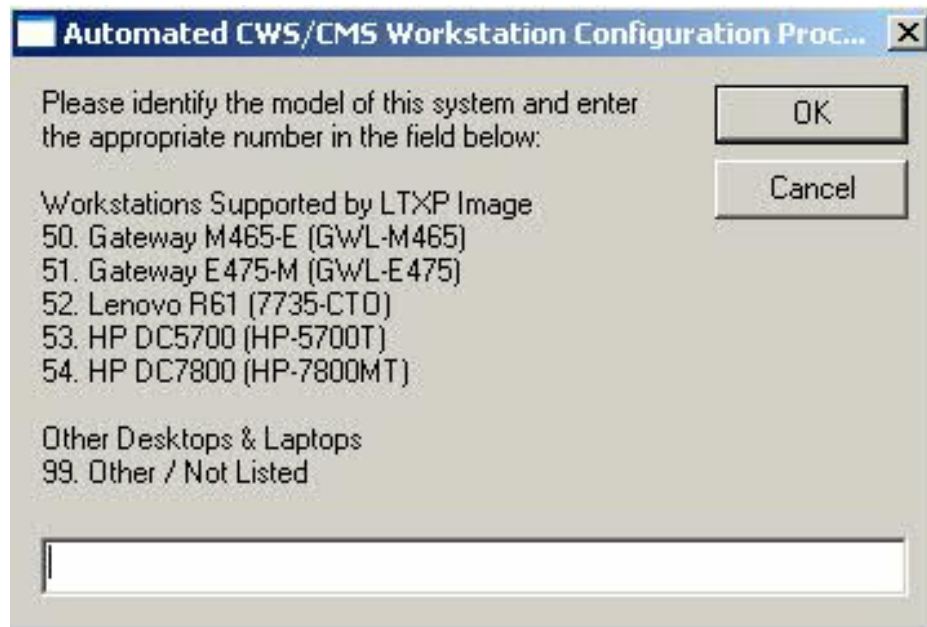
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[6] Co-existent counties that do not use serial number as their naming convention may cancel the AutoName process by clicking the "cancel" button and then manually entering the computer name.

10. During the second and final boot of the Automated Workstation Configuration Process, the user is asked to select the model/type of system on which they have loaded the image. The items that appear in the dialog box will vary based on the image used. Once a selection is made, the user is asked to confirm the selection.

Automated CWS/CMS Workstation Configuration Proc... ✕

Please identify the model of this system and enter
the appropriate number in the field below:

Workstations Supported by LTXP Image
50. Gateway M465-E (GWL-M465)
51. Gateway E475-M (GWL-E475)
52. Lenovo R61 (7735-CTO)
53. HP DC5700 (HP-5700T)
54. HP DC7800 (HP-7800MT)

Other Desktops & Laptops
99. Other / Not Listed

[OK]
[Cancel]

[   ]

Automated CWS/CMS Workstation Configuration Process ✕

You have chosen the system type listed below
Is this correct?

Gateway E475-M (GWL-E475M)

[Yes]   [No]

11. The user is prompted for their CWS/CMS county and site number[7]. The format for the user's response needs to be *XXYY* (where *XX* is the county number and *YY* is the site number). Leading zeros MUST be included. For example, site one in Alpine would be entered as 0201. The information entered by the user is used to join the workstation to the CWSDOM domain. Once the county and site information has been entered, the user clicks **OK**[8].
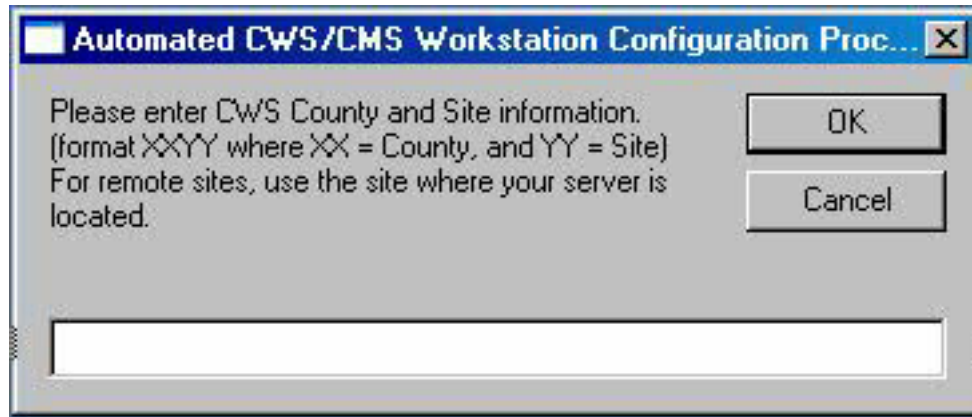
12. During the Automated Domain Join Process, the user will see a screen similar to this:
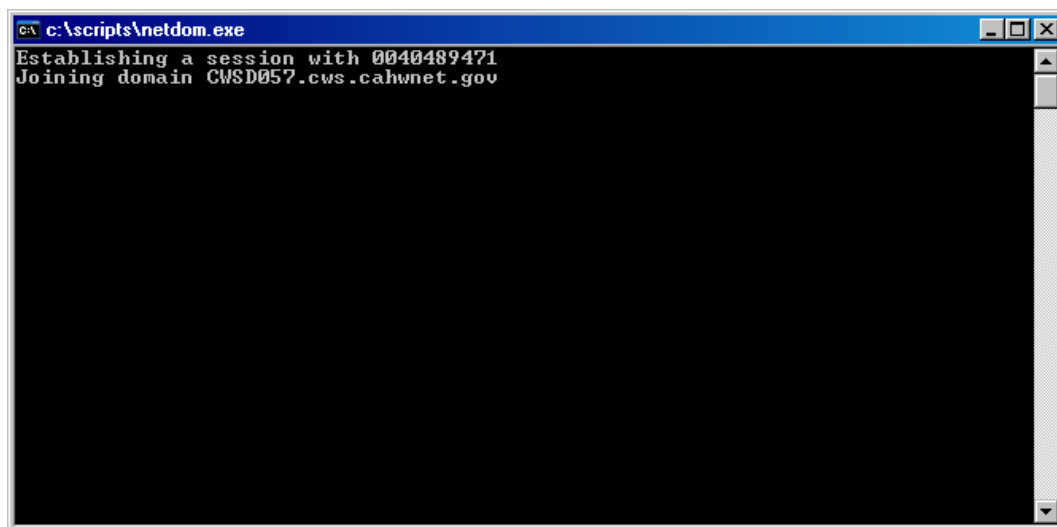
[7] Users at remote sites should enter the site information for their associated server site. This process supports alpha site "numbers" for counties with that configuration.

[8] If the automated domain join fails, the user will be notified and told to complete the process manually. This process must be completed before the user reboots. See *Section 3.4: Recovery Problems* for more information.

13. If the Automated Domain Join Process (a sub process to the Automated Workstation Configuration Process) was successful, the Authenticated Users group will be automatically added to the local Power Users group and removed from the local Users group[9].

14. The user will then be notified that the Automated Workstation Configuration Process is complete. They should click **OK** to reboot the workstation.
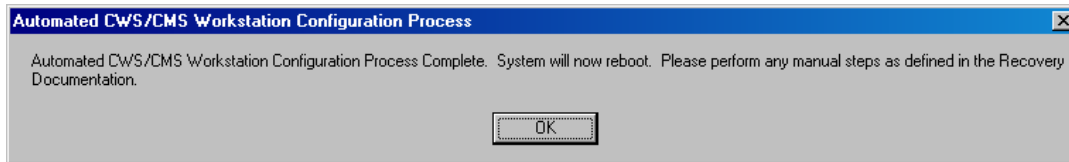
15. Once the workstation is rebooted, the user is prompted to log onto the domain. They enter their user ID and password and in the domain dropdown box they select the domain name, CWSDOM. The login script performs any additional requirements for the workstation.

16. The first time a user logs into the workstation, they are prompted for their email logon ID and password for Outlook auto configuration process. You can check "remember password" when prompted for id/password during Outlook auto configuration process. For shared computers, this process will need to be repeated for all users. This process may be canceled if you do not wish to use Outlook at this time.

17. There are several manual configuration steps that need to be performed. Please see *Section 4.0: Workstation Customization after Image Installation* for more information.

3.4. Recovery Problems

There are a number of places where this process can fail. The most common are listed in *Table 3-2: Recovery Process Troubleshooting*, along with associated solutions.

Table 3-2: Recovery Process Troubleshooting

Problem	Solution
DVD Doesn't Boot	The BIOS should be set to boot first from diskette, second from the DVD, and third from the hard drive. Verify the BIOS is set correctly. If not, correct it. If the BIOS is set correctly, you may need to use the bootable diskette included on the recovery DVD. There is a *diskette* folder on the Recovery DVD and in this folder is a batch file called *makedisk*. Insert a blank diskette into the floppy drive on any workstation and then run the *makedisk* batch file on that same workstation. Then, insert both the Recovery diskette and the Recovery DVD into the workstation you are attempting to recover and reboot it. The workstation should boot from the diskette and kick off the recovery process on the DVD.

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[9] Should the automated move of Authenticated Users from the local Users group to the local Power Users group fail, the user will be notified. The process should be completed manually. See *Section 3.4: Recovery Problems* for more information.

Problem	Solution
Recovery Process reports this is a NEW or Unrecognized image when it is an existing CWS/CMS Windows 2000 or XP workstation.	The recovery process determines the difference between an existing CWS/CMS Window 2000/XP workstation and an unrecognized image or unformatted hard drive simply by checking for the existence of a hidden flag file (*cws-wks.flg*) in the data partition. If the flag file is not there, the process assumes it is NOT an existing CWS/CMS Windows 2000/XP workstation. If you are **SURE** the workstation is an existing CWS/CMS Windows 2000/XP workstation, **AND** the 2-GB data drive exists, you may create a hidden file called *cws-wks.flg* (its contents are not important) in the root of the data drive to force the Recovery process to treat this workstation as an existing CWS/CMS Windows 2000/XP workstation.
Image Version Verification Error: Outdated Image!	Version Error: If the network share is located, the version on the DVD will be checked against what is essentially a flag file on the network share. If the two files don't match, it most likely means the user should get a newer version of the DVD for their image – that is, we have updated the image since the time that the user's DVD was released. This check allows us to maintain a uniform deployment of images across the counties.
Image Version Verification Error: Network Error!	Network Error[10]: If the process cannot find both the version file on the network AND a generic file on the network, this error will be generated. The underlying process involves making a network connection to \\D990801\WSIMAGES with the "recovery2k" ID and checking for flag files. If the user is receiving a "network error", the things to check are mostly network connectivity issues, such as a bad/incorrect NIC, network cable not connected, DHCP not functioning, Name Resolution not functioning, WAN outage, server D990801 is down, recovery2k account lock out or expired password, etc.[11]
Workstation Name Change failure	It is possible that the automated process to read the BIOS and determine the serial number of the workstation may fail. If this happens, the user will be prompted to enter the serial number and the automatic rename will continue based on the user entry.
Failure to join the Domain	This can be caused by the user entering an incorrect name for the OU/Domain for their location or by network problems. If this happens, the process will not complete and the user will be notified they need to complete this step manually and then reboot. It is critical this step is completed before reboot, as the Automated Workstation Configuration Process will be considered complete as soon as the workstation is rebooted, and the Administrator will no longer be automatically logged in. A standard CWS/CMS user does not have the authority to add the workstation to the CWSDOM domain, nor to add the "Domain Users" group to the local "Power Users" group. To correct the problem, the Help Desk should use Netfinity to access the workstation (or walk the user through it) and perform the process described below:

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[10] After the rehost project, anyone using an image version below v2.80 will receive this error. Obtain the latest image recovery disk(s) from the CWS Helpdesk to correct the error.

[11] Due to network connectivity restraints from workstations in co-existent counties to server D990801, it is likely most co-existent counties will receive this error.

Problem	Solution
	1. Select **Run** from the **Start** Menu 2. Enter *c:\windows\cwsrec\jdhelper.vbs* and click **OK** 3. JDHELPER will instruct the user to verify network connectivity via IPCONFIG and PING before continuing 4. JDHELPER will then prompt the user for their County and Site information[12] 5. JDHELPER will then display the Domain and OU names that the workstation will attempt to join 6. JDHELPER will issue the "*netdom join*" command in a DOS window and the results will be shown in a dialog box. If the join was not successful, action should be taken based on the error given. Please see the *Recovery Problem* section "JDHELPER Errors" for more information If you do not receive an error, the process completed successfully; you can restart the system If you do not receive an error, the process completed successfully; you can restart the system
Unable to add "Authenticated Users" to local "Power Users" group	The CWS/CMS user should have "Power User" authority on their local workstation. By default, when the workstation is added to the CWSDOM domain, the "Authenticated Users" group is added to the local "Users" group. If the automated process fails, the user will have to complete it manually. Most often, this process fails because the workstation is not a member of the CWSDOM domain at the time the automated process is executed. The workstation must be added to the CWSDOM domain before this process can complete. Once the workstation has joined the domain, the process can be performed from the command line; a local administrator must issue this command. If the automated process has already completed, and the user is logged in, the Help Desk may need to take remote control of the workstation, log on as an Administrator, and complete the process. To initiate the process manually, open a command prompt and enter: Net localgroup "Power Users" /ADD "Authenticated Users"
Unable to remove "Authenticated Users" from local "Users" group	Most often, this process fails because the workstation is not a member of the CWSDOM domain at the time the automated process is executed. The workstation must be added to the domain before this process can complete, and Authenticated Users should have successfully been added to the local Power Users group. A local administrator must issue this command from the command line. If the automated process has already completed, and the user is logged in, the Help Desk may need to take remote control of the workstation, log on as an Administrator, and complete the process. To initiate the process manually, open a command prompt and enter:

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[12] Users at remote sites should enter the site information for their associated server site.

Problem	Solution
	Net localgroup "Users" /DELETE "Authenticated Users"
Unable to add "WSADMINS" to local "Administrators" group	This error is only applicable in dedicated counties. Most often, this process fails because the workstation is not a member of the CWSDOM domain at the time the automated process is executed. The workstation must be added to the domain before this process can complete. If this process fails, there is nothing that needs to be done manually; however, members of the WSADMINS group will not have Administrative access on this workstation for up to 24 hours
Failure of the new image to boot	This could be because the image didn't copy properly, or if it did copy correctly, the hardware internally could be incorrect. For example, if the user places a SCSI hard drive in the workstation where an IDE drive is the default, the image will not boot. The resolution is to standardize the equipment and try again; be aware that any of the automated backup methods employed by the image DVD may be lost. The DVD's backup methods copy data to the hard drive, which, if replaced, is lost. There are other methods for resolving problems with booting to the new image, including the option of wiping the entire hard drive clean and starting from scratch. These should be weighed against the loss of data on both the original image and/or on the second partition.
Lost Files/Backup Problems	The automated backup is a "Best Effort" backup, and should not be construed as anything more. It may miss some, or potentially all, of the user's files and settings. It is policy for the users NOT to save personal data to the local workstation, and if they do, they are responsible for its safety. The solution to lost data is to recover data from any backups the user may have made. It should also be noted that the "Best Effort Backup" will only be run if the user places the DVD in the workstation WHILE Windows 2000 or XP is running. Otherwise, they will be warned, but no backup will be performed.
JDHELPER Errors (What version am I running? The version of JDHELPER will be shown on the title bar of the window when it runs. An up-to-date version of JDHELPER can be obtained by calling the CWS/CMS Help Desk.)	JDHELPER.VBS is a Visual Basic script that assists with the process of joining a domain and adding a workstation to the correct OU. It is usually run when the domain/OU join that is part of the Automated Workstation Configuration Process fails. JDHELPER can produce several different errors. A description of the errors and their resolution are shown below: This Workstation is already joined to a domain: • The workstation has already joined a domain successfully. Right-click on My Computer and choose Properties. Then go to the Network Identification tab and click Properties. Verify the domain name joined is correct. If so, everything is set up and there is no need to run JDHELPER. Logon Failure: unknown username or bad password: • Contact Server Management and verify the password for "recovery2k" is set correctly and the account is not locked out. Access is denied: • Contact Server Management and verify that "recovery2k" has

Problem	Solution
	authority to add computers to the OU for this site. The account already exists: • Contact Server Management and have them MOVE the existing computer account. It may be under the Computer folder for the CWSDOM domain, or the "*OUccssComputers*" folder (where cc=county number and ss=site number). After Server Management completes the MOVE, wait ten minutes and re-run JDHELPER. The specific domain either does not exist or could not be contacted: • Most likely there is some kind of network connectivity or name resolution error. You can ➢ Verify the IP settings are correct on the workstation. ➢ Verify you can ping the server by IP. ➢ Verify IP address and network connectivity. ➢ Verify you can ping the fully qualified domain name (i.e. "ping cwsd0cc.cws.cahwnet.gov", where cc is the county number). The remote computer is not available (co-ex counties only): • File and print sharing is not installed on this workstation. Either install this feature (preferred) or use the GUI to join the CWSDOM domain.
On HP DC7900 and Lenovo R500 workstations, the CD boots fine but when it gets to "Starting Windows XP recovery process" the machine reports: Invalid Drive Specification Bad Command or file name	AHCI mode storage setting in the system bios is incompatible with CWS Recovery DVD. You need to change the setting in the system bios to use the CWS recovery CD. On the HP DC7900: Hit F10 repeatedly when you first power on the workstation until you see the language selection bar. Select English and arrow over to Storage. Select Storage Options, then arrow down to SATA Emulation. Arrow right to IDE. Ignore the warning box. Press F10 2 times until you are back at the main menu then select Save Changes and Exit. On the Lenovo R500 Power on the system and press F1 to enter the bios. Select Config and press Enter. Arrow down to Serial ATA and hit Enter. Press Enter and arrow up to "Compatibility" then press Enter again. Press F10 then press Enter to save changes.

4.0 Workstation Customization after Image Installation

This section contains the procedures used to install/recover the CWS workstation image on a supported CWS workstation.

4.1. Printer Setup

Before the start of the recovery process, the configuration of the user's print queues should have been documented. This information will be used to set up access to the printers the user had configured on their workstation prior to the workstation recovery.

1. Click **Start** | **Run**.

2. Enter the Universal Naming Convention (UNC) of the user's PRINT server (e.g. *\\D570101*) and click **OK**. You should see a list of all shares available on the server. All printer shares will show up as printer icons.

3. Locate the printers the user had configured before the recovery took place. Remember, there should be two icons for each printer, one that uses the *LaserJet IIID* driver and one that uses the print driver that ships with the printer.

4. For each printer that the user needs set up, do the following:

    a. Double-click the printer icon in the **Browse** window.

    b. You will be asked if you want to setup the printer on your computer; click **Yes**.

    c. If the add was successful, The **Print Queue** window will open. Close it.

4.2. Document Restoration

Document restoration is the user's responsibility. There is a directory the user has access to on the D: drive called *Backup* that has a backup of their documents if they chose to use the automated method. They MUST review the *Backup* folder move any documents they consider important back to the **My Documents** folder on the desktop. For a shared workstation, each user is responsible for restoring their documents.

4.3. Changing the Screen Resolution

CWS/CMS Desktop images are set native resolution by default. In most cases, the default screen resolution will be adequate and desirable. In a few instances, the end user may wish to increase (or decrease) the default resolution. To modify the screen resolution, do the following:

• Right-click the desktop, select **Properties**, then click the **Settings** tab.

• Drag the selector under **Screen area** to the desired resolution and click **Apply** (for LCDs this is typically 1024x768 or 1280x1024).

- You will see a test of your resolution selection. When prompted, select if you want to use the selected resolution.
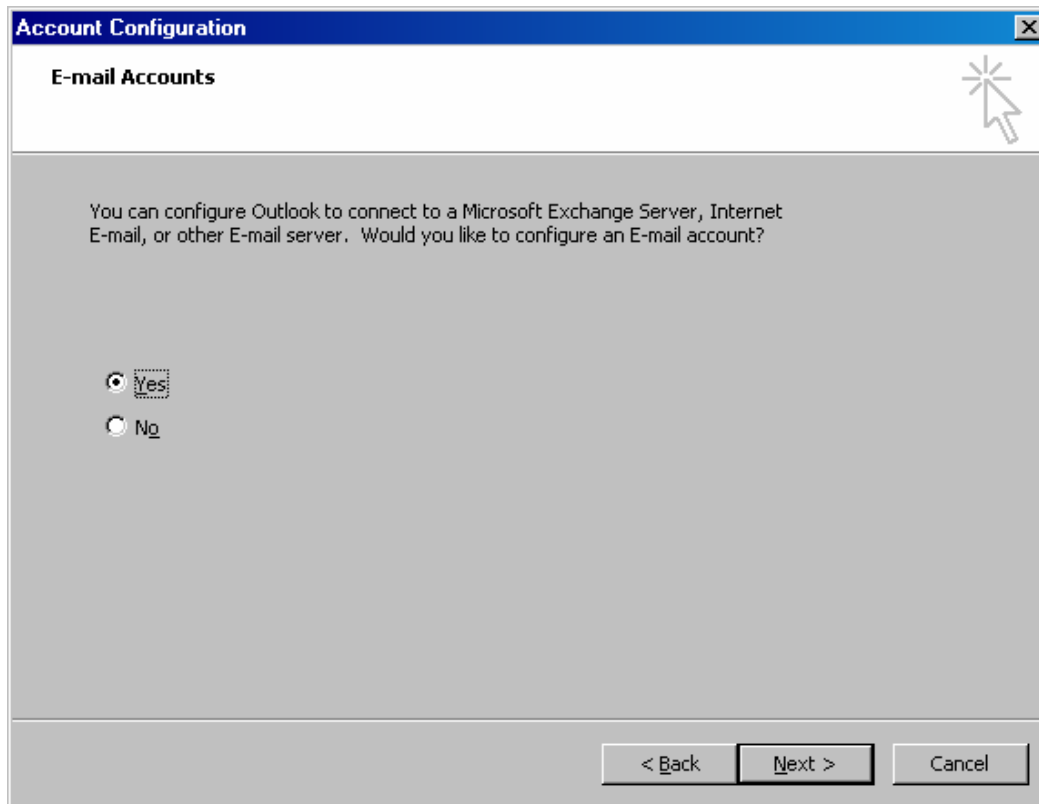
4.4. Outlook Configuration

Outlook users will be required to enter unique server and user identification information the first time MS Outlook is ran. The configuration of the Outlook client is as follows:
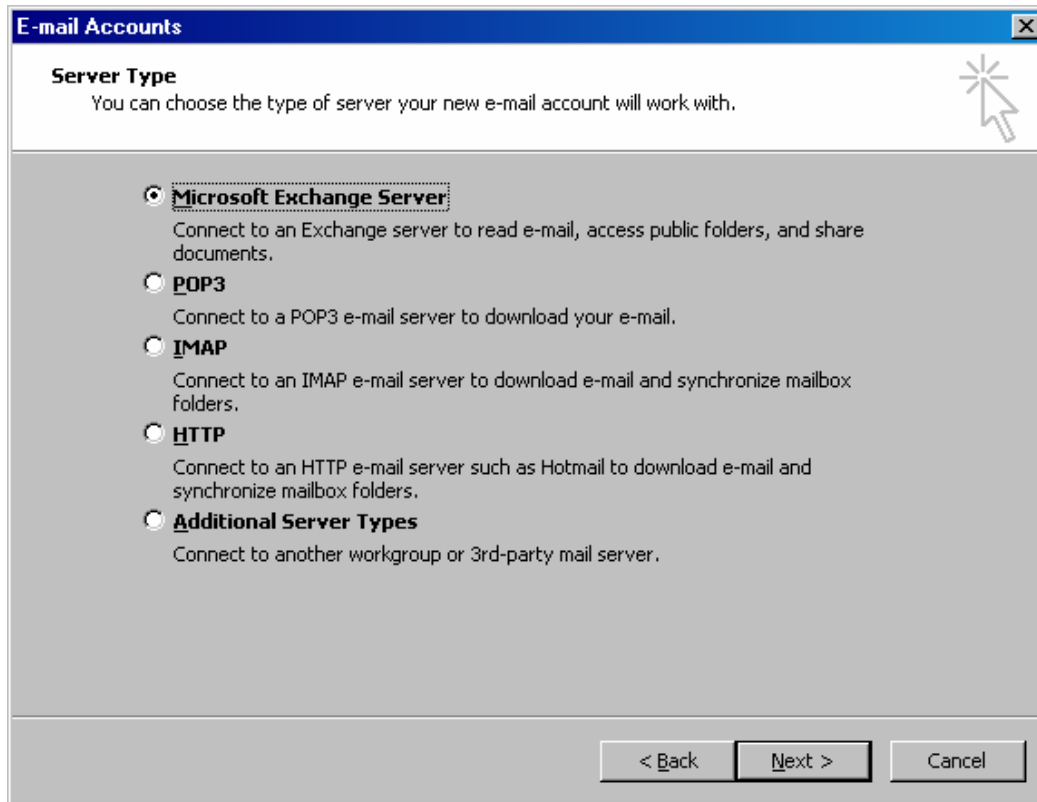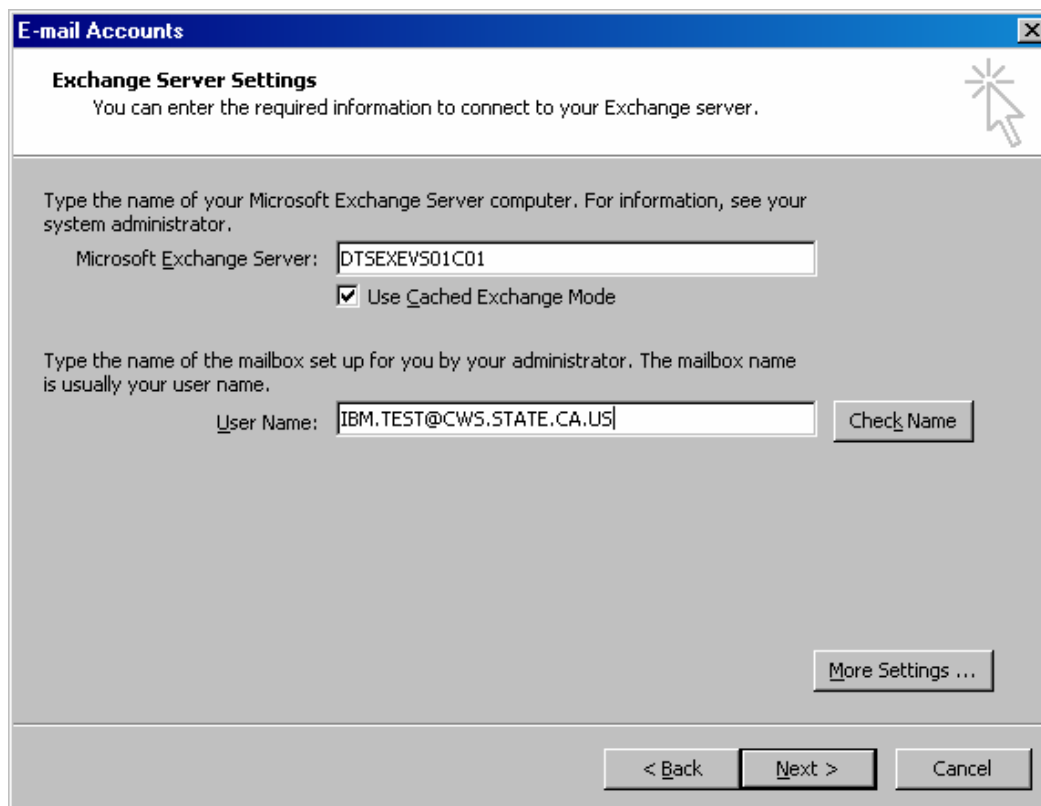
1. Click "Next >"

2. Check to see that "yes" is selected and click "Next >"

Account Configuration

E-mail Accounts

You can configure Outlook to connect to a Microsoft Exchange Server, Internet E-mail, or other E-mail server. Would you like to configure an E-mail account?

◉ Yes
○ No

< Back   Next >   Cancel

3. Verify Microsoft Exchange Server is selected and click "Next >"

4. In the Exchange Server Settings window, enter DTSEXEVS01C01 for Microsoft Exchange Server and leave "Use Cached Exchange Mode" checked. Enter the email address of the user in the User Name field and click next.

This should complete your Outlook setup. If you are prompted for your user name, password and domain, enter your assigned user name and password with CWSDOM as the domain. You should only need to do this one time.

Users that utilize Outlook Web Access (OWA) need to log onto the web address https://webmail.ca.gov/exchange. At the OWA login screen, the user should enter the following credentials:

Domain\User name: cwsdom\UserName (where UserName is your exchange ID)
Password: The password you use to logon to email.

4.5. CWS/CMS Application Install and Test

1. Log on to the CWSDOM domain and execute the logon script.

2. Click the CWS/CMS application icon on the Quick Launch bar.

3. The CWS/CMS application installs.

4. Reboot the workstation.

5. Log on to CWSDOM domain and execute the logon script.

6. Click on the CWS/CMS application Icon on the Quick Launch bar.

7. Log on to the CWS/CMS application.

8. Make sure the **CWS/CMS Control Panel** starts. If it does, close the **CWS/CMS Control Panel**. If it does not start, reboot and try again, then perform normal troubleshooting applicable to the CWS/CMS application.

4.6. Configuration of Microsoft Dial-up Client

This process is required for laptops and ASA desktops ONLY. Before performing this process, make sure you have logged in via the LAN and configured/tested the CWS/CMS application (For more detailed Dial-up Client configuration instructions, see the *Windows 2000 Laptop Users Guide*).

1. Log on to the workstation with the Windows/Domain ID of the user you wish to configure Microsoft Dial-up Client.

2. Select Network and Dial-up Connections from the Start Menu (under Start->Settings).

3. The **Network Connections** window will open. Double-click on **New Connection.** This will start the New Connection Wizard**.**

4. When you see the Welcome to the Connection Wizard window, click **NEXT.**

5. Select **Connect to the network at my workplace** and click **NEXT**.

6. Make sure **Dial-up to private network** is selected and click **NEXT.**

7. Type **CWS Dial-up** as the name of the connection and click **NEXT.**

8. Enter **1-800-923-7725** in the **Phone Number** field and click **NEXT.**

9. Check **Add a shortcut to my desktop** and click **FINISH.**

10. The **Connect CWS Dial-up** window will appear. Click **CANCEL** to close the window.

11. Close the **Network and Dial-up Connections** window.

12. You should see a **CWS Dial-up** icon on your desktop

13. Configure Proxy:

- If the user is going to access any web sites while dialed up, the proxy server configuration must also be performed.

- Open **Microsoft Internet Explorer** by double-clicking on the desktop icon.

- Select **Internet Options** from the **Tools** menu in Internet Explorer.

- Select the **Connections** tab. Then, select **CWS Dial-up** and click **SETTINGS**.

- Check **Use a proxy server for this connection**

- In the Address field, enter: **cwsproxy03.cahwnet.gov**[13]

- In the Port field, enter: **8080**

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[13] Please note that this address has changed from hhsdcproxy.cws.cahwnet.gov.   Users will need to input the new correct address as stated.

- Click OK to close the **CWS Dial-up Settings** window.

- Click OK to close the **Internet Options** window.

- Close Internet Explorer

For detailed usage, testing, and configuration procedures on laptops, please see the *Windows 2000 Laptop Users Guide*.

Appendix A. – Supported Hardware Configurations

The workstation models listed in *Table A-1: Desktop Workstation Reference Matrix* and *Table A-2: Laptop Workstation Reference Matrix* are supported, under Windows XP, as of the date of this document.

Table A-1: Desktop Workstation Reference Matrix

Manufacturer	Model #	Model Name	CPU	Hard Drive	Memory	Current Image (Name/Version)
HP	RK895US	HP/Compaq DC5700M	Pentium D @ 2.8Ghz	80GB	512MB	XP Desktop 5.10
HP	GC762AV	HP/Compaq DC7800	Core 2 Duo (E6750) @ 2.66Ghz	80GB	1024MB	XP Desktop 5.10
HP	PU699AV[14]	HP/Compaq DC7600	Pentium 4 @ 3.0 Ghz	80GB	1024MB	XP Desktop 5.02
HP	AS361US#ABA[15]	HP/Compaq DC7900	Core 2 Duo (E7200) @ 2.53Ghz	80GB	1024MB	XP Desktop 5.10

Table A-2: Laptop Workstation Reference Matrix

Manufacturer	Model #	Model Name	CPU	Hard Drive	Memory	Current Image (Name/Version)
Lenovo	7735-CTO	R61	Core 2 Duo (T7300) @ 2.0Ghz	100GB	1024MB	XP Laptop 5.10
Gateway	1MA65114946	M465-E	Core Duo (T5500) @ 1.66	37.0GB	512MB	XP Laptop 5.10
Gateway	1QA15003785	E475-M	Core 2 Duo (T7500) @ 2.2Ghz	80GB	1024MB	XP Laptop 5.10
Lenovo	2718-CTO	R500	Core 2 Duo (P8600) @ 2.2Ghz	160GB	1024MB	XP Laptop 5.10

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[14] HP DC7600 (Model PU699AV) image is provided on 5.02 CD-ROM only

[15] The DC7900 (Model AS363US#ABA) is also compatible and supported. During model selection choose DC7900 (AS361US#ABA)